Amendment Under 37 C.F.R. § 1.111

U.S. Appln. No.: 10/046,095

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Previously Presented) A ground connection structure comprising:

a substrate, on whose surface a ground is formed;

a ground connecting member which is connected to said ground; and

a compensating member which compensates for an area of said ground and is joined to

said substrate such that said ground connecting member is sandwiched between said

compensating member and said substrate, wherein said ground connecting member:

extends from said substrate toward said compensating member;

directly resiliently contacts said compensating member; and

electrically connects said ground with said compensating member in a low impedance

state.

2. (Previously Presented) The ground connection structure according to claim 1, wherein

said ground connecting member comprises:

a base which is connected to said ground; and

a spacer which is arranged on said base and has elasticity.

3. (Previously Presented) The ground connection structure according to claim 2, wherein:

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said substrate has at least one through-hole for fixing said ground connecting member on said substrate; and

said base includes at least one lead, which is inserted into the at least one through-hole and connected to said ground.

- 4. (Previously Presented) The ground connection structure according to claim 3, wherein said at least one lead has elasticity and a protruding portion for fixing said ground connecting member onto said substrate.
- 5. (Previously Presented) The ground connection structure according to claim 2, wherein said base has at least one lead having a margin, left for being connected to said ground and formed in parallel with surface of said ground.
 - 6. (Previously Presented) The ground connection structure according to claim 2, wherein said spacer includes a plate spring.
 - 7. (Previously Presented) The ground connection structure according to claim 2, wherein said spacer includes a coil spring.
- 8. (Previously Presented) A ground connecting member, which is arranged between a substrate and a compensating member which compensates for an area of a ground formed on said

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substrate, and which electrically connects said ground and said compensating member, and said ground connecting member comprising:

a base which is connected to said ground; and

a spacer which is arranged on said base and has elasticity, wherein:

said spacer is in direct physical contact with said compensating member; and said ground connecting member is sandwiched between said substrate and said compensating member, and electrically connects said ground and said compensating member in

a low impedance state.

9. (Previously Presented) The ground connecting member according to claim 8, wherein: said substrate has at least one through-hole for fixing said ground connecting member onto said substrate;

said base has at least one lead to be inserted into the at least one through-hole; and said at least one lead has elasticity and a protruding portion for fixing said ground connecting member onto said substrate.

10. (Previously Presented) The ground connecting member according to claim 8, wherein said base has at least one lead having a margin, left for being connected to said ground and being in parallel with surface of said ground.

11. (Previously Presented) The ground connecting member according to claim 8, wherein

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said spacer includes a plate spring.

12. (Previously Presented) The ground connecting member according to claim 8, wherein

said spacer includes a coil spring.

13. (Previously Presented) A ground connection method comprising:

connecting a ground connecting member having elasticity and conductivity, to a ground

formed on a substrate; and

arranging a compensating member for compensating for an area of said ground, on said

substrate, wherein said ground connecting member:

extends from said substrate toward said compensating member;

to directly resiliently contacts said compensating member; and

is sandwiched between the compensating member and said substrate, thereby electrically

connecting said ground and said compensating member via said ground connecting member in a

low impedance state.

14. (Previously Presented) The ground connection structure according to claim 2,

wherein said compensating member is contacted directly by said spacer.

15. (Previously Presented) The ground connection structure according to claim 1,

wherein

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said ground connecting member comprises a base section and a spacer;

a plurality of leads project from said base section toward said substrate, and are electrically connected to said ground; and

said spacer is arranged between, and electrically connects, said base section and said compensating member, and has elasticity.

16. (Previously Presented) The ground connection structure according to claim 15, wherein:

said base section comprises a generally planar portion extending generally in parallel to said substrate; and

said plurality of leads project orthogonally from said generally planar portion.

17. (Previously Presented) The ground connection structure according to claim 15, wherein:

said substrate further comprises through holes;

said ground is arranged on a side of said substrate opposite to said compensating member; and

said plurality of leads pass through said through holes to be electrically connected to said ground.

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18. (Previously Presented) The ground connection structure according to claim 17,

wherein:

a distal end of at least one of said plurality of leads comprises a protruding section

integral to said at least one of said plurality of leads;

when said plurality of leads pass through said through holes, said protruding section is

arranged on a side of said substrate opposite to said base section, and mechanically fixes said

substrate between said protruding section and said base section, so that no solder is required to

connect said at least one of said plurality of leads to said ground.

19. (Previously Presented) The ground connection structure according to claim 15,

wherein:

said ground is arranged on a side of said internal substrate adjacent to said compensating

member; and

at least one of said plurality of leads comprises a tip part that extends generally

orthogonally from said at least one of said plurality of leads to provide said electrical connection

between said at least one of said plurality of leads and said ground.

20. (Previously Presented) A ground connection structure comprising:

a substrate, on whose surface a ground is formed;

a ground connecting member which is connected to said ground; and

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a compensating member which compensates for an area of said ground and is joined to said substrate such that said ground connecting member is sandwiched between said compensating member and said substrate, and wherein said ground connecting member extends from said substrate toward said compensating member to resiliently contact said compensating member by being sandwiched between said substrate and said compensating member, and electrically connects said ground with said compensating member in a low impedance state, wherein:

said ground connecting member comprises a base which is connected to said ground and a spacer which is arranged on said base and has elasticity; and

wherein said compensating member is contacted directly by said spacer.

- 21. (Previously Presented) A ground connection structure comprising:
- a substrate, on whose surface a ground is formed;
- a ground connecting member which is connected to said ground; and
- a compensating member which compensates for an area of said ground and is joined to said substrate such that said ground connecting member is sandwiched between said compensating member and said substrate, and wherein said ground connecting member extends from said substrate toward said compensating member to resiliently contact said compensating member by being sandwiched between said substrate and said compensating member, and electrically connects said ground with said compensating member in a low impedance state, wherein:

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a plurality of leads project from said base section toward said substrate, and are electrically connected to said ground; and

said ground connecting member comprises a base section and a spacer;

said spacer is arranged between, and electrically connects, said base section and said compensating member, and has elasticity.

22. (Previously Presented) The ground connection structure according to claim 21, wherein:

said base section comprises a generally planar portion extending generally in parallel to said substrate; and

said plurality of leads project orthogonally from said generally planar portion.

23. (Previously Presented) The ground connection structure according to claim 21, wherein:

said substrate further comprises through holes;

said ground is arranged on a side of said substrate opposite to said compensating member; and

said plurality of leads pass through said through holes to be electrically connected to said ground.

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24. (Previously Presented) The ground connection structure according to claim 21, wherein:

a distal end of at least one of said plurality of leads comprises a protruding section integral to said at least one of said plurality of leads;

when said plurality of leads pass through said through holes, said protruding section is arranged on a side of said substrate opposite to said base section, and mechanically fixes said substrate between said protruding section and said base section, so that no solder is required to connect said at least one of said plurality of leads to said ground.

25. (Previously Presented) The ground connection structure according to claim 21, wherein:

said ground is arranged on a side of said internal substrate adjacent to said compensating member; and

at least one of said plurality of leads comprises a tip part that extends generally orthogonally from said at least one of said plurality of leads to provide said electrical connection between said at least one of said plurality of leads and said ground.

26. (Previously Presented) A ground connecting member, which is arranged between a substrate and a compensating member which compensates for an area of a ground formed on said substrate, and which electrically connects said ground and said compensating member, and said ground connecting member comprising:

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a base which is connected to said ground; and

a spacer which is arranged on said base and has elasticity, wherein

said spacer is in contact with said compensating member, in a state where said ground connecting member is sandwiched between said substrate and said compensating member, and electrically connects said ground and said compensating member in a low impedance state; and

27. (Previously Presented) A ground connection method comprising:

said compensating member is contacted directly by said spacer.

connecting a ground connecting member having elasticity and conductivity, to a ground formed on a substrate; and

arranging a compensating member for compensating for an area of said ground, on said substrate such that said ground connecting member extends from said substrate toward said compensating member to resiliently contact said compensating member and is sandwiched between the compensating member and said substrate, thereby electrically connecting said ground and said compensating member via said ground connecting member in a low impedance state, wherein

said ground connecting member comprises a base which is connected to said ground and a spacer which is arranged on said base and has elasticity, and

said compensating member is contacted directly by said spacer.

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28. (Currently Amended) The ground connection structure according to claim 1, wherein the entire structure of said ground connecting member structure is located on one side of said compensating member.

29. (Currently Amended) The ground connection structure according to claim 4 8, wherein the entire structure of said ground connecting member structure is located on one side of said compensating member.

30. (Currently Amended) The ground connection structure method according to claim 13, wherein the entire structure of said ground connecting member structure is located on one side of said compensating member.

- 31. (New) A ground connection structure comprising:
- a substrate, on whose surface a ground is formed;
- a ground connecting member which is connected to said ground; and
- a compensating member which compensates for an area of said ground and is joined to said substrate such that said ground connecting member is sandwiched between said compensating member and said substrate, wherein:

said ground connecting member comprises a proximal end fixed to said substrate, and an elastic distal end directly resiliently contacting said compensating member; and

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said ground connecting member electrically connects said ground with said compensating member in a low impedance state.

32. (New) A ground connection method comprising:

connecting a ground connecting member having elasticity and conductivity, to a ground formed on a substrate; and

arranging a compensating member for compensating for an area of said ground, on said substrate, wherein:

said ground connecting member comprises a proximal end fixed to said substrate, and a elastic distal end directly resiliently contacting said compensating member;

said ground connecting member is sandwiched between the compensating member and said substrate; and

said ground connecting member electrically connects said ground with said compensating member in a low impedance state.

- 33. (New) The ground connection structure according to claim 2, said spacer is in direct physical contact with said compensating member.
- 34. (New) The ground connection structure according to claim 13, wherein said ground connecting member comprises:
 - a base which is connected to said ground; and

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a spacer which is arranged on said base and has elasticity.

35. (New) The ground connection structure according to claim 34, said spacer is in direct physical contact with said compensating member.